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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/631,121

07/31/2003

Edward C. Giaimo III

MICR0402

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07/03/2006

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EXAMINER

WIMER, MICHAEL C

ART UNIT

PAPER NUMBER

2821

DATE MAILED: 07/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/631,121

Applicant(s)

GIAIMO ET AL.

Examiner

Michael C. Wimer

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6,8,10-15,18-21 and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuramoto (6816120) in view of Ehrenspeck (3742513).

Regarding Claims 1-6,8,10-15,18-21 and 24-27, Kuramoto shows in Fig. 2, an accessory 10 and method for increasing range and for use with an existing external antenna system 20-22, where the antenna 20 is part of the external antenna system and disposed with a support 22 coupled to a wireless device (see Fig. 9, where the entire assembly 1 is clearly disposed upon the wireless device beneath the support). It would have been obvious to the skilled artisan that the accessory and the support base 22 is mounted on and physically supported by the wireless device (unnumbered in Fig. 9), as claimed. Since the coax and connector, 2,3 projecting from the base 22 is to be connected to the wireless device, a skilled artisan would have found it to be obvious that the wireless device is within the unnumbered structure in Fig. 9, supporting the entire external antenna system. The accessory 10 has conductive material 12, curved and straight (Figures 7 and 11) disposed thereon and all arranged for the purpose recited. The device is deemed to be clipped or bracketed to the existing

antenna. The reflector 12 produces a directional antenna pattern and extends the range of the signal in the desired direction. To further illustrate the function of the reflector, Ehrenspeck is cited as evidence of obviousness and as resolving the level of ordinary skill in the antenna art and teaches the use of a reflector 1 and director 5, both spaced from the driven, active antenna element 3 according to a wavelength dimension of the signal used in the antenna system. It would have been obvious to the skilled artisan to employ the reflector 12 in Kuramoto et al. and space it from the antenna 20 a given fraction of the wavelength used in the antenna system or frequency of operation, according to the teaching of Ehrenspeck, in order to provide a gain and maximum beam pattern.

3. Claims 7,9,16,17,22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuramoto (6816120) in view of Ehrenspeck (3742513) as applied to claims 1,6,11 and 19 above, and further in view of Johnson (6208300).

Regarding Claims 7,9,16,17,22 and 23, no director clipped to the support is taught in the primary reference device. Thus, Johnson is cited as resolving the level of ordinary skill in the antenna art and as evidence of obviousness and shows a director element 30 clipped, via 32, to the existing antenna 26 of a communication device 10, and teaches the relationship of the spacing relative to the wavelength used in the system in the paragraph bridging columns 4 and 5. It would have been obvious to the skilled artisan to employ such a director along with the reflector in Kuramoto/Ehrenspeck for the purpose of providing further gain to the system. The arrangement shown is coupled to a vertical surface as

recited. Additionally, a skilled artisan would have found it obvious to provide any support for antennas to be connected to any surface mounting.

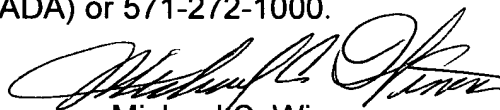
***Response to Arguments***

4. Applicant's arguments filed 2/22/2006 have been fully considered but they are not persuasive. Specifically, any spacing between antenna elements, whether driven or parasitic, is always with reference to the wavelength of the frequency used in the antenna system. Further, the language used in Claim 11 is still broader than the other amendments made in Claims 1 and 19 because it lacks the recitation to a wavelength of the signal used in the antenna system. The Ehrenspeck patent is newly cited to show that reflectors and directors in antenna systems incorporating parasitic elements are critically spaced in order to provide the proper beam pattern and phasing of the signal.
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Wimer whose telephone number is (571) 272-1833. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minsun O. Harvey can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2828

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Michael C. Wimer  
Primary Examiner  
Art Unit 2828

MCW  
6/14/2006